

Central Intelligence Agency



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DIRECTORATE OF INTELLIGENCE

31 July 1985

**Market Rationale for Low Semiconductor
Exports to Japan**

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Summary

US semiconductor manufacturers have a lower market share in Japan than in the rest of the world and complain that this discrepancy proves Tokyo still protects its semiconductor industry from foreign competition. Our analysis suggests, however, that past restrictions on foreign access to the Japanese market and structural factors account for the difference to a greater extent than do current trade barriers.

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Low Sales to Japan . . .

Until the mid-1970s, Japanese Government policy limited imports and foreign investment in the electronics sector.

This memorandum was prepared by Japan Branch, Northeast Asia Division, Office of East Asian Analysis. Information available as of 31 July was used in its preparation. Comments and questions are welcome and may be directed to the Chief, Japan Branch, Northeast Asia Division, OEA,

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Although the US share of Japan's semiconductor market¹ may be depressed by residual effects of these policies, we believe current market factors play a greater role.

- Japanese manufacturers have lower production costs for 64K and 256K Dynamic Random Access Memories (DRAMS), the focus of Japanese production, compared with those of US companies. This difference results from their past high levels of plant and equipment investment and more efficient production techniques.

The Japanese benefit from lower domestic shipping and maintenance costs as well.

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- In-house consumption reduces the demand for US goods. The largest Japanese producers--such as NEC, Hitachi and Toshiba--are all vertically integrated electronics companies, consuming about 20 percent of their own production in the manufacture of consumer electronics and computers. In addition, many other consumer electronics and office machine manufacturers--the primary end users in Japan--produce semiconductors exclusively for in-house use. Many of these firms are entering the commercial semiconductor market, further increasing competition.

- The strong dollar reduces exports to Japan more than to other countries because competition for market share in Japan is fierce.

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. . . Contrast with High Sales Elsewhere

In contrast to US semiconductor firms' delayed entry into the Japanese market, US producers entered West European markets during their formative years. Because this penetration of Europe coincided with the period of US domination of the world semiconductor industry, US firms were able to capture a large market share. Until recently, the Japanese have not attempted to challenge the US dominance in Europe, instead targeting the unrestricted, larger US market. Western Europe has import restrictions--circumvented by US manufacturers through investment--and language barriers that complicate marketing for the Japanese.

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US market share in non-European countries--such as Singapore, Hong Kong, and South Korea--is also much higher than in Japan, again because US firms entered these markets before

¹ US market share in Japan is 19.1 percent according to the Electronics Industry Association of Japan, whose estimate includes production of US companies in Japan, and 11.4 percent according to the US Semiconductor Industry Association.

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Japan was competitive. Japanese companies do not appear to find it profitable to challenge established US producers for these relatively small markets, where US firms have already established assembly plants. [REDACTED]

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Future Trends

Recent Japanese marketing and investment efforts, including construction of manufacturing plants in Germany by Hitachi and Toshiba, and the reentry of European firms into high-volume sectors of the industry could decrease US market share in Europe. As demand for more sophisticated semiconductors expands outside Europe and the United States, Japanese companies may attempt to increase their market share. The outlook for US sales in Japan is less certain. In an effort to reduce trade friction with the United States, some Japanese semiconductor manufacturers, including Hitachi, have announced programs to expand procurement of US-made semiconductors. The results will probably be limited, however, because Japanese producers also have begun to abide by voluntary export restrictions. They are unlikely to concede much of their domestic market share to such offshore procurement programs. [REDACTED]

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